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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,432	09/07/2006	Andreas Wiers	20800/0204926-US0	2324

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EXAMINER	
KREINER, MICHAEL B	
ART UNIT	PAPER NUMBER
4174	

MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,432	WIERS ET AL.	
	Examiner	Art Unit	
	Michael Kreiner	4174	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *6/10/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 November 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/10/2005, 8/17/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: L3a, L3b, L4a, L4b. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 16-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banks et al. (U.S. Pat. No. 5,180,121).

Regarding claim 16, Banks teaches an aircraft door arrangement, especially for an airplane, comprising: a door (14 in fig. 1); a door frame (16 in fig. 1); a support arm (24 in fig. 2) having a first pivoting axis defined by two articulated joints (25 and 26 in fig. 1) disposed at a distance from each other in a vertical direction of the support arm and a second pivoting axis, the door disposed on the support arm and pivotable about the door side pivoting axis and the support arm disposed on the frame and pivotable about the frame side pivoting axis (col. 3 *l.* 53-60), wherein at least one of the articulated joints includes two bearings (138 in fig. 3) disposed at a distance from each other in the vertical direction, one of the two bearings including a pivoting drive mounting (54 in fig. 3); a pivoting drive (12 in fig. 1) disposed in a region of the support arm and attached to the pivoting drive mounting (col. 4 *l.* 31-33), the pivoting drive configured to pivot the door; and a driven element (44 in fig. 3) coupled to the pivoting drive and to the door and configured to transmit an actuating movement of the pivoting drive to the door (col. 8 *l.* 18-24).

Banks fails to teach that the first pivoting axis defined by the articulated joints is the door side pivoting axis, and likewise the second pivoting axis defined by clevises (28 in fig. 1) is the frame side pivoting axis. It would have been obvious to one of ordinary skill in the art at the time of the invention to reverse the configuration of the support arm connections to predictably obtain the same functionality without introducing any further elements to the aircraft door apparatus.

Regarding claim 17, Banks teaches that, relative to the vertical direction, the upper one of the two articulated joint (25) includes the two bearings (138) and the lower one of the two bearings includes the pivoting drive mounting (col. 12 *l.* 65-68).

Regarding claim 18, Banks teaches that, relative to the vertical direction, the lower one of the two articulated joint includes the two bearings and the upper one of the two bearings includes the pivoting drive mounting (col. 4 *l.* 31-33).

Regarding claim 19, Banks fails to teach an attachment device configured to detachably affix the pivoting drive mounting to the support arm. Banks's pivoting drive mounting (54) is part of the support arm (24), and is not detachable from the support arm. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the pivoting arm mounting as a separate part and attach it to the support arm with attachment devices such as fasteners. Such a design would predictably allow for easier removal of the pivoting drive assembly, and is considered an obvious design variation.

Regarding claim 20, Banks teaches that the pivoting drive mounting is configured integrally with the support arm (col. 4 *l.* 31-33).

Regarding claim 21, Banks teaches the pivoting drive mounting includes a bearing section (76 in fig. 3), the bearing (138 in fig. 3) being formed in the bearing section.

Regarding claim 22, Banks teaches the pivoting drive mounting includes a pivoting drive attachment section (54) extending essentially vertically with respect to the door side pivoting axis and connected to a front section (44 in fig. 3) of the pivoting drive (col. 4 *l.* 31-33).

Regarding claim 23, Banks teaches the pivoting drive includes a support arm attachment section (col. 4 *l.* 31-33).

Regarding claim 24, Banks teaches the pivoting drive mounting has a driven axis disposed flush with the door side pivoting axis (axis extending through the center of piston 42 in fig. 3).

Regarding claim 25, Banks teaches the pivoting drive mounting (54) is disposed in the door side pivoting axis and between the two articulated joints (25 and 26, where clevis flange 99 of plate 96 is the lower flange of 26 as shown in fig. 3 and discussed in col. 5 *l.* 49-55).

Regarding claim 26, Banks teaches the pivoting drive (12) includes a hollow driven shaft (42 in fig. 3) and a bearing pin (44 in fig. 3) engaging non-rotatably into the shaft, the bearing pin extending all the way through the first bearing and into the pivoting drive mounting (54), and wherein the driven element is connected non-rotatably to the bearing pin (col. 8 *l.* 18-24).

Regarding claim 27, Banks teaches a portion of the pivoting drive (splined sleeve 44 in fig. 3) attached to the pivoting drive mounting (54) forms a hinge site (col. 8 *l.* 18-20).

Regarding claim 28, Banks teaches a driven shaft (42) of the pivoting drive forms a hinge pin of the one articulated joint (26) on which the pivoting drive mounting is disposed (col. 8 *l.* 18-24), and wherein the driven element is rotatably connected to the driven shaft.

Regarding claim 29, Banks fails to teach the driven element (44) engages the support arm (24) between the pivoting drive mounting (54) and the other of the two bearings (25). Banks's driven element engages the support arm at the pivoting drive

mounting, predictably with no overall change in functionality, as an obvious design variation.

Regarding claim 30, Banks teaches the door is a passenger door (col. 1 *l.* 11-13).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Erben et al. (US PGPub No. 2002/0139897) teaches an aircraft door arrangement where a single rotating actuator installed on a support arm is used to open the door (see ¶ 18 and 20 especially).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kreiner whose telephone number is (571)270-5379. The examiner can normally be reached on Monday-Thursday 7:30am-5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly D. Nguyen can be reached on (571)272-2402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. K./
Examiner, Art Unit 4174

/Kimberly D Nguyen/
Supervisory Patent Examiner, Art Unit 4174